CLAIMS: The following is a listing of all claims in the application with their status and the text of all active claims.

1. (CURRENTLY AMENDED) A system for managing calculation expressions, comprising:

    (a) memory means, for storing information about said calculation expressions; and

    (b) processing means, for creating one or more arboreal graphical representations; [for modifying the content or form of said calculation expressions;]

    [(c) means for receiving external input; and]

    (c) [(d)] displaying means, for showing one or more said arboreal graphical representations;

    wherein

    (i) [(a)] an arboreal graphical representation is an entity that shows a calculation expression in the form of a tree, [in such a way that at least two different subexpressions of said expression are assigned to two different nodes of said tree].

    (ii) [(b)] at least one fragment of said calculation expression is shown in two different nodes of said tree, wherein one of those two different nodes is an ancestor node to the [other] second node, and said ancestor node [contains] shows at least the fragment [of the descendent] shown in said second node plus one or more additional fragments of said calculation expression.[, and]

    [(c) at least one node shows only an introduced subexpression, wherein an introduced subexpression is a subexpression which is introduced by an operator, wherein said operator indicates how the content of the node is to be compounded with other nodes in the tree to yield the whole expression or another subexpression of higher order.]

2. (CURRENTLY AMENDED) A system as claimed in claim 1, further comprising means for [editing said one or more arboreal graphical representations, wherein said editing comprises one or more of the following actions: (1) creating after blank situation, (2) modifying, (3) creating after blank situation and modifying.]

    (a) accepting input from the user, and

    (b) modifying the form of said arboreal graphical representation accordingly to said input.

3. (DELETED)

4. (CURRENTLY AMENDED) A system as claimed in claim 1, wherein one of said graphical representations is a TOWER STRUCTURE, wherein said tower structure is characterized by the following:

    (a) the nodes of the tree are arranged in vertical fashion, <u>where each node, except the top one, is located immediately below another node,</u> [some nodes being located over other nodes,] and

    (b) said system comprises means to indicate which nodes are the parent of which nodes.

5. (ORIGINAL) A system as claimed in claim 1, wherein one of said graphical representations is a VERTICAL STRUCTURE, wherein said vertical structure is characterized by the following:

    (a) the nodes of the tree expand in vertical fashion, so that if a node is at a given position, its child nodes are located at a lower position, and

    (b) it comprises means for indicating which nodes are the parents of which nodes.

6. (DELETED)

7. (ORIGINAL) A system as claimed in claim 1, wherein one of said arboreal graphical representations is a HORIZONTAL STRUCTURE, wherein said horizontal structure is characterized by the following:

    (a) the nodes of the tree expand in horizontal direction, so that a parent node has a different horizontal position than its child nodes, and

    (b) said system comprises means for indicating which nodes are the parents of which nodes.

8. (DELETED)

9. (DELETED)

10. (CURRENTLY AMENDED) A system as claimed in claim 1, further comprising means for ~~applying the feature of GROUPING OF PEERS, which is characterized because said system imposes the condition that the operators that link different sister nodes have the same type~~.

    (a) detecting whether three or more sister nodes are joined by operators that have different types

    (b) when the condition in the previous paragraph is met, warning the user about said circumstance.

11. (CURRENTLY AMENDED) A system as claimed in claim 1, further comprising means for ~~applying the feature of SEQUENCIATION OF NON ASSOCIATIVE OPERATORS, which is characterized by the fact that the system imposes the obligation that the operators that join sister nodes must satisfy the associative property~~.

    (a) detecting whether three or more sister nodes are joined by operators that do not follow the associative property,

    (b) when the condition in the previous paragraph is met, warning the user about said circumstance,

wherein said operators belong to the same type or belong to different types or operators.

12. (CURRENTLY AMENDED) A system as claimed in claim 1, further comprising means for ~~applying the functionality of EXPLICATIVE TEXT, whereby a descriptive text is associated to one or more of the nodes of said graphical representations.~~ showing a text or texts next to one or more of the nodes of said graphical representation, said text or texts containing descriptive information about the content of said one or more nodes.

13. (DELETED)

14. (DELETED)

15. (DELETED)

16. (ORIGINAL) A system as claimed in claim 1, further comprising means for expanding and collapsing nodes in said arboreal graphical structures.

17. (DELETED)

18. (DELETED)

19. (CURRENTLY AMENDED) A method for managing calculation expressions, comprising the following steps:

(a) storing information about said calculation expressions,

(b) [(a)] creating one or more arboreal graphical representations [structures],

(c) [(b)] showing said one or more arboreal graphical representations to the user, wherein

(i) [(a)] an arboreal graphical representation is an entity that shows a calculation expression in the form of a tree, [in such a way that at least two different subexpressions of said expression are assigned to two different nodes of said tree],

(ii) [(b)] at least one fragment of said calculation expression is shown in two different nodes of said tree, wherein one of those two different nodes is an ancestor node to the [other] second node, and said ancestor node [contains] shows at least the fragment [of the descendent] shown in said second node plus one or more additional fragments of said calculation expression. [, and]

[(c) at least one node shows only an introduced subexpression, wherein an introduced subexpression is a subexpression which is introduced by an operator, wherein said operator indicates how the content of the node is to be compounded with other nodes in the tree to yield the whole expression or another subexpression of higher order.]

20. (CURRENTLY AMENDED) A method as claimed in claim 19, further comprising the steps of [~~the step of editing said one or more arboreal graphical representations, wherein said editing comprises one or more of the following actions: (1) creating after blank situation, (2) modifying, (3) creating after blank situation and modifying.~~] (a) accepting input from the user, and (b) modifying the structure or the content of said arboreal graphical representation accordingly to said input.

21. (DELETED)

22. (ORIGINAL) A method as claimed in claim 19, wherein one of said graphical representations is a TOWER STRUCTURE, wherein said tower structure is defined in claim 4.

23. (ORIGINAL) A method as claimed in claim 19, wherein one of said graphical representations is a VERTICAL STRUCTURE, wherein said vertical structure is defined in claim 5.

24. (DELETED)

25. (DELETED)

26. (DELETED)

27. (DELETED)

28. (DELETED)

29. (DELETED)

30. (CURRENTLY AMENDED) A method as claimed in claim 19, further comprising the step of [applying the functionality of EXPLICATIVE TEXT, wherein said functionality is described in claim 12.] showing a text or texts next to one or more of the nodes of said graphical representation, said text or texts containing descriptive information about the content of said one or more nodes.

31. (DELETED)

32. (DELETED)

33. (DELETED)

34. (DELETED)

35. (DELETED)

36. (DELETED)

37. (DELETED).

38. (DELETED)

39. (DELETED)

40. (CURRENTLY AMENDED) A system as claimed in claim 1, further comprising means for [applying the functionality of PARTIAL RESULTS, where said functionality is characterized by the following:

1.- for one or more nodes, it shows a value that is associated to said node or nodes, wherein said value depends on the evaluation of said expression for said node or nodes.] showing a text or texts next to one or more of the nodes of said graphical representation, said text or texts containing the value of said expression for said node or nodes.

41. (PREVIOUSLY PRESENTED) A system as claimed in claim 1, further comprising means for converting said calculation expression into other type of entities, such as for example formulae for environments such as spreadsheet applications, search strings for database applications or Internet search engines or other types of entities.

42. (CURRENTLY AMENDED) A method as claimed in claim 19, further comprising the step of [applying the functionality of PARTIAL RESULTS, where such functionality is defined in claim 40.] showing a text or texts next to one or more of the nodes of said graphical representation, said text or texts containing the value of said expression for said node or nodes.

43. (DELETED)

44. (PREVIOUSLY PRESENTED) A computer readable medium containing computer executable instructions that, when executed by one or more processors of a computer, allows said one of more processors to perform the following steps [of the method of claim 19.]:

(a) storing information about said calculation expressions,

(b) creating one or more arboreal graphical representations,

(c) showing said one or more arboreal graphical representations to the user,

wherein

(i) an arboreal graphical representation is an entity that shows a calculation expression in the form of a tree,

(ii) at least one fragment of said calculation expression is shown in two different nodes of said tree, wherein one of those two different nodes is an ancestor node to the second node, and said ancestor node shows at least the fragment shown in said second node plus one or more additional fragments of said calculation expression.

45. (NEW) A system as claimed in claim 1, further comprising means for warning the user about a part of said calculation expression that has a specific characteristic, wherein said means for warning the user comprises one or more of the following plurality of means:

(a) displaying a text

(b) displaying an image

(c) changing one or more colors in the tree or in its background

(d) blocking editing by the user in other parts of the tree while said part of said calculation expression remains having said specific characteristic.

46. (NEW) A method as claimed in claim 19, further comprising the steps of

(a) detecting whether three or more sister nodes are joined by operators that do not follow the associative property,

(b) when the condition in the previous paragraph is met, warning the user about said circumstance,

wherein said operators belong to the same type or belong to different types or operators.